

**Amendments to the Claims:**

This listing of claims will replace all prior versions, and listings of claims in the application:

**Listing of Claims:**

1                    1. (currently amended)            In a memory controller, for use in a programmable  
2 logic device for connection to an external memory device, a method of performing a prefetch  
3 operation, the method comprising:

4                               testing whether a present read access request is such that there is a high  
5 probability that said present read access request relates to configuration data for said  
6 programmable logic device; and

7                               performing a prefetch operation ~~only~~ if it is determined that there is a high  
8 probability that said present read access request relates to configuration data for said  
9 programmable logic device.

1                    2. (currently amended)            A method as claimed in claim 1, wherein the step of  
2 testing whether a present read access request is such that there is a high probability that said  
3 present read

4                               access request relates to configuration data for said programmable logic device  
5 comprises:

6                               determining whether the present read access request ~~relates to~~ is of a burst type  
7 from a predetermined group of suitable burst types, selected from the possible burst types.

1                    3. (original)            A method as claimed in claim 2, wherein the predetermined group  
2 of suitable burst types comprises defined length accesses.

1                    4. (currently amended)            A method as claimed in claim 1, further comprising,  
2 if it is determined that a prefetch operation is to be performed:

3                               when the present read access request is completed, testing whether a read buffer  
4 contains an amount of unused space exceeding a predetermined threshold; and

5 performing the prefetch operation ~~only~~ if it determined that the read buffer  
6 contains an amount of unused space exceeding a predetermined threshold.

1 5. (original) A method as claimed in claim 4, further comprising prefetching a  
2 predetermined amount of data.

1 6. (original) A method as claimed in claim 5, wherein said predetermined  
2 threshold for said amount of unused space in the read buffer corresponds to said predetermined  
3 amount of data.

1 7. (currently amended) A method as claimed in claim 5, further comprising,  
2 after prefetching said predetermined amount of data:  
3 testing whether said read buffer still contains an amount of unused space  
4 exceeding said predetermined threshold; and  
5 continuing a prefetch operation ~~only~~ if it determined that the read buffer still  
6 contains an amount of unused space exceeding said predetermined threshold.

1 8. (original) A method as claimed in claim 7, further comprising prefetching a  
2 further predetermined amount of data.

1 9. (currently amended) A method as claimed in claim 2, further comprising,  
2 if a further read access request is received while a prefetch operation is in progress:  
3 determining whether said further read access request ~~relates to~~ is of a burst type  
4 from said predetermined group of suitable burst types; and  
5 terminating said prefetch operation if said further read access request ~~does~~ is not  
6 ~~relate to~~ of a burst type from said predetermined group of suitable burst types.

1 10. (currently amended) A method as claimed in claim 9, further comprising,  
2 if a further read access request is received while a prefetch operation is in progress, and if said  
3 further read

4 access request ~~does~~ is not relate to of a burst type from said predetermined group  
5 of suitable burst types:

6 flushing prefetched data from a read buffer, and subsequently performing the  
7 operation requested in said further read access request.

1 11. (currently amended) A method as claimed in claim 9, further comprising  
2 continuing said prefetch operation, and returning prefetched data to a requesting device, ~~only~~ if a  
3 start address of said further read access request corresponds to a start address of said prefetch  
4 operation which is in progress.

1 12. (currently amended) A programmable logic device, comprising:  
2 a configuration memory, for storing configuration data; and  
3 a memory controller, for connection to an external memory device, wherein, when  
4 said memory controller receives a present read access request, said memory controller retrieves  
5 the data requested in said present read access request, and determines whether said present read  
6 access request is such that there is a high probability that said present read access request relates  
7 to configuration data for said programmable logic device; and  
8 said memory controller performs a prefetch operation after completing retrieval of  
9 the data requested in said present read access request ~~only~~ if it is determined that there is a high  
10 probability that said present read access request relates to configuration data for said  
11 programmable logic device.

1 13. (currently amended) An electronic system, comprising a programmable  
2 logic device and an external memory device, wherein said programmable logic device  
3 comprises:  
4 a configuration memory, for storing configuration data; and  
5 a memory controller, for connection to said external memory device, wherein,  
6 when said memory controller receives a present read access request, said memory controller  
7 retrieves the data requested in said present read access request, and determines whether said

8 present read access request is such that there is a high probability that said present read access  
9 request relates to configuration data for said programmable logic device; and

10 said memory controller performs a prefetch operation after completing retrieval of  
11 the data requested in said present read access request ~~only~~ if it is determined that there is a high  
12 probability that said present read access request relates to configuration data for said  
13 programmable logic device.

1 14. (original) An electronic system as claimed in claim 13, wherein said external  
2 memory device comprises a flash memory device.

1 15. (original) An electronic system as claimed in claim 13, wherein said external  
2 memory device comprises a SRAM device.

1 16. (canceled)

1 17. (currently amended) A programmable logic device as claimed in claim  
2 12, wherein said memory controller determines whether said present read access request is ~~in the~~  
3 ~~form~~ of a defined length burst.

1 18. (currently amended) A programmable logic device as claimed in claim  
2 12, wherein said memory controller performs a prefetch operation after completing retrieval of  
3 the data requested in said present read access request ~~only~~ if it is determined that a read buffer  
4 contains an amount of unused space exceeding a predetermined threshold.

1 19. (currently amended) A programmable logic device as claimed in claim  
2 12 wherein, if a further read access request is received while a prefetch operation is in progress,  
3 said memory controller returns prefetched data to a requesting device if:

4 the further read access request ~~relates to~~ is of a defined length burst;

5 the further read access request corresponds to a same chip select of said prefetch  
6 operation which is in progress; and

7                   the start address of said further read access request corresponds to a start address  
8 of said prefetch operation which is in progress.

1                   20. (currently amended)       An electronic system as claimed in claim 13,  
2 wherein said memory controller determines whether said present read access request is ~~in the~~  
3 ~~form~~ of a defined length burst.

1                   21. (currently amended)       An electronic system as claimed in claim 13,  
2 wherein said memory controller performs a prefetch operation after completing retrieval of the  
3 data requested in said present read access request ~~only~~ if it is determined that that buffer space is  
4 available.

1                   22. (currently amended)       An electronic system as claimed in claim 13,  
2 wherein, if a further read access request is received while a prefetch operation is in progress, said  
3 memory controller returns prefetched data to a requesting device if:

4                   the further read access request ~~relates to~~ is of a defined length burst;

5                   the further read access request corresponds to a same chip select of said prefetch  
6 operation which is in progress; and

7                   the start address of said further read access request corresponds to a start address  
8 of said prefetch operation which is in progress.